

LED T8 SUPER HYBRID - 12W / 15W

INSTALL INSTRUCTIONS (UL TYPE A & B)

PLEASE FIND A QUALIFIED ELECTRICIAN FOR INSTALLATION. Read the instructions before installing or use.

GENERAL: ALL ELECTRICAL CONNECTIONS MUST BE IN ACCORDANCE WITH LOCAL AND NATIONAL ELECTRICAL CODE (N.E.C.) STANDARDS. IF YOU ARE UNFAMILIAR WITH PROPER ELECTRICAL WIRING CONNECTIONS OBTAIN THE SERVICES OF A QUALIFIED ELECTRICIAN. REMOVE THE TRIM FROM THE BOX AND MAKE SURE THAT NO PARTS ARE MISSING.

THIS RETROFIT KIT IS ACCEPTED AS A COMPONENT OF A LUMINAIRE WHERE THE SUITABILITY OF THE COMBINATION SHALL BE DETERMINED BY AUTHORITIES HAVING JURISDICTION.

RETROFIT KIT INCLUDES; TUBE, OPERATION INSTRUCTION AND LABELS FOR SINGLE-ENDED OR DOUBLE-ENDED APPLICATION.

- **WARNING** - Risk of fire or electric shock. LED linear tube installation requires knowledge of luminaires electrical systems. If not qualified, do not attempt installation. Contact a qualified electrician.
- **WARNING** - Risk of fire or electric shock. Install these tubes only in luminaires that have the construction features and dimensions shown in the photographs and/or drawings and where the input rating of the retrofit kit does not exceed the input rating of the luminaire.
- **WARNING** - To prevent wiring damage or abrasion, do not expose wiring to edges of sheet metal or other sharp objects.
- **WARNING** - To avoid potential fire or shock hazard, do not use this retrofit kit in luminaires employing shunted bi-pin lampholders. Note: Shunted lamp holders are found only in fluorescent luminaires with Instant-Start ballasts. Instant-start ballasts can be identified by the words "Instant Start" or "I.S." marked on the ballast. This designation may be in the form of a statement pertaining to the ballast itself, or may be combined with the marking for the lamps with which the ballast is intended to be used, for example F40T12/IS. For more information, contact the LED luminaire retrofit kit manufacturer.
- **CAUTION** - Risk of fire or electric shock. Do not use if lamp is damaged or broken. Do not make or alter any open holes in an enclosure of wiring or electrical components during kit installation.
- Installers should not disconnect existing wires from lampholder terminals to make new connections at lampholder terminals. Instead installers should cut existing lampholder leads away from the lampholder and make new electrical connections to lampholder lead wires by employing applicable connectors.
- Installers should examine all parts that are not intended to be replaced by the retrofit kit for damage and replace any damaged parts prior to installation of the kit.

SAFETY INFORMATION

- Check the lamp before installation, if there is any damage caused during shipping, do not install.
- Maintenance should be carried out by technical personnel only.
- Do not stare directly at the light source for long periods of time, do not shine into others eyes.
- Do not place objects on the lamp.
- Keep lamp away from flames or high temperature objects.
- Risk of electrical shock - Only replace with same type of LED tube.
- If the glass lamp tube is broken, the lamp must be disposed of immediately.
- Suitable for damp locations.

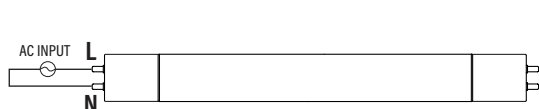
MAINTENANCE NOTES

- Disconnect lamp from power supply before and maintenance.
- Clean luminaire with dry cloth.
- Do not clean the lamp with corrosive chemicals.

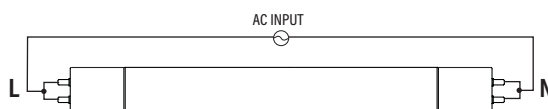
OPERATIONAL MODES

Mode I: Direct replacement (UL Type A), Plug & Go™, compatible with most instant start electronic ballasts, see ballast compatibility list.

Mode II: Direct wire (UL Type B), ballast bypass, directly connects to line voltage: 120-277VAC · 50/60Hz, single or double ended.



Single Ended
(Use non-shunted sockets)



Double Ended
(Use shunted sockets)

LED T8 SUPER HYBRID - 12W / 15W

INSTALL INSTRUCTIONS (UL TYPE A & B)

MODE I: DIRECT REPLACEMENT (Plug & Go™) INSTRUCTIONS



WARNING DISCONNECT POWER BEFORE INSTALLING OR SERVICING.

TYPE A LAMP - intended for direct substitution of fluorescent lamp and operation from the integral ballast without any modifications to the fluorescent luminaire.

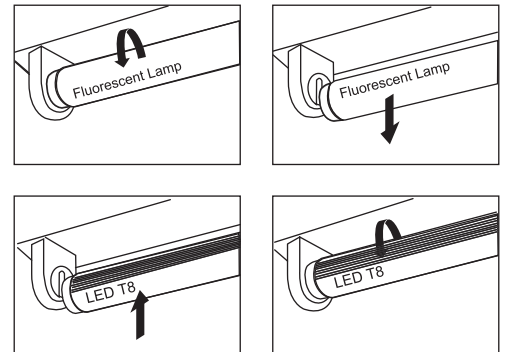
SAFETY PRECAUTIONS

- **WARNING - Risk of Shock:** Disconnect power before installation.
- **WARNING - Risk of Fire:** Use only in place of fluorescent lamps specified on label.
- LED T8 lamp for use only with products described and installed in accordance with product specifications. LED T8 lamp to be operated with qualified T8 fluorescent electronic ballast; check ballast compatibility list before installation.
- This product may cause interference to radio equipment and should not be installed near maritime safety communications equipment or other critical navigation or communication equipment operating between 0.45-30MHz.
- Do not install this lamp in a pre-heat luminaire.
- This lamp only operates on electronic T8 instant-start ballasts. If the lamp does not light when the luminaire is energized, remove lamp from luminaire and contact lamp manufacturer or qualified electrician.
- **CAUTION - Risk of Fire:** If the lamp or luminaire exhibits undesirable operation (buzzing, flickering, etc.) Immediately turn off power, remove lamp from luminaire and contact manufacturer.
- Suitable for damp locations.
- Not for emergency lighting.

Suggestion for Direct Replacement Mode: Please use jumpered or shunted sockets. This lamp is only compatible with instant start T8 electronic ballasts, and the bi-pin on lamp base are not electrically connected internally.

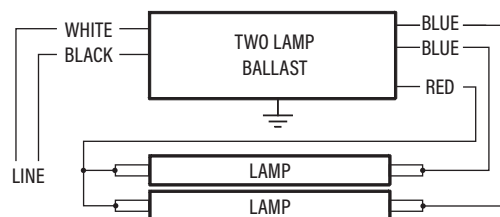
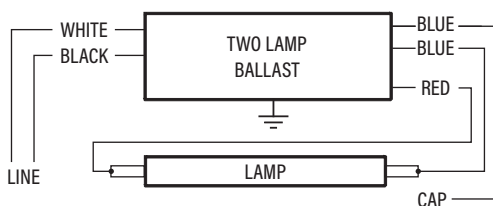
INSTALLATION

1. Make sure power is OFF.
2. Remove lens or diffuser (if applicable).
3. Remove existing fluorescent lamps from the luminaire. **Note:** Verify that the fluorescent tube type is listed on the LED lamp label. Check ballast compatibility list before installation, only use lamp with qualified T8 fluorescent ballast.
4. Bring LED lamp to luminaire and insert lamp pins into luminaire lampholders.
5. Rotate LED lamp until lamp locks in place. Ensure that the LED lamp front points away from the back of the luminaire.
6. Place lens or diffuser back in place (if applicable).
7. Turn power on.

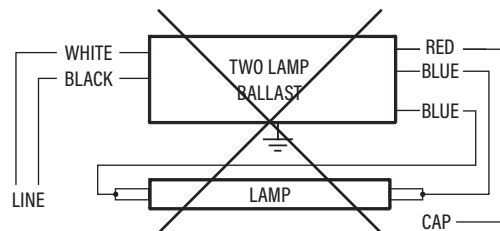
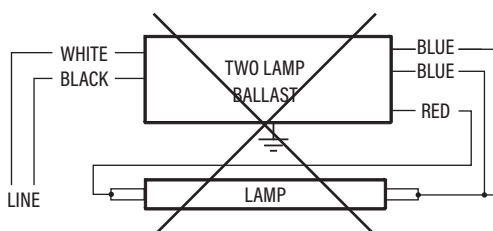


INSTANT START BALLAST WIRING DIAGRAM

ONE & TWO LAMP BALLAST WIRING - CORRECT



ONE & TWO LAMP BALLAST WIRING - INCORRECT



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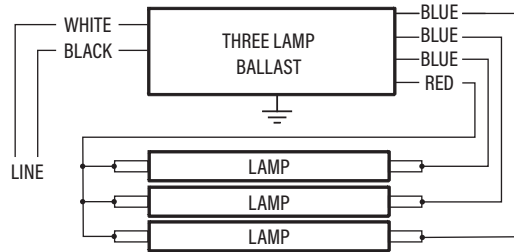
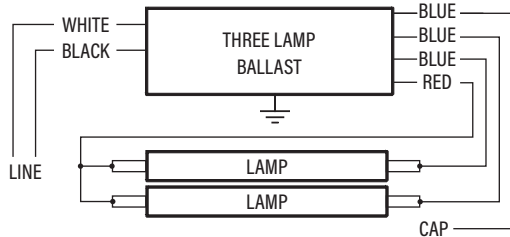
INSTALL INSTRUCTIONS (UL TYPE A & B)

MODE I: DIRECT REPLACEMENT (Plug & Go™) INSTRUCTIONS

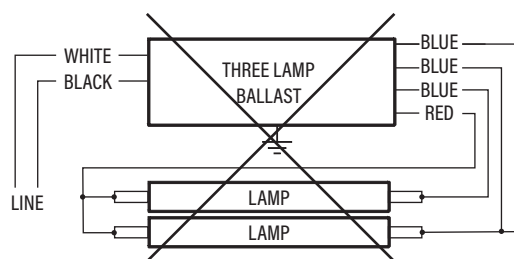
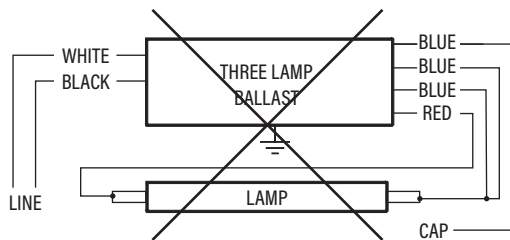
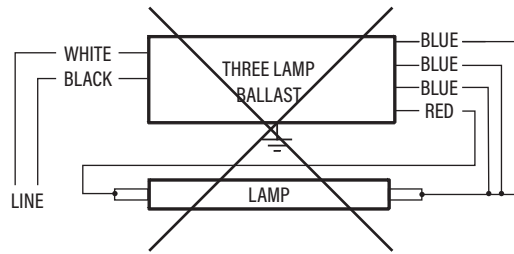
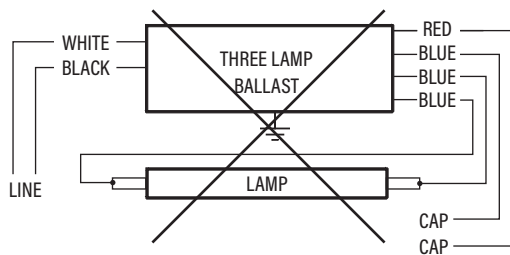
⚠ WARNING DISCONNECT POWER BEFORE INSTALLING OR SERVICING.

INSTANT START BALLAST WIRING DIAGRAM

LAMP BALLAST WIRING - CORRECT



LAMP BALLAST WIRING - INCORRECT



Mode II: DIRECT WIRE (Bypass) INSTRUCTIONS

⚠ WARNING DISCONNECT POWER BEFORE INSTALLING OR SERVICING.

TYPE B LAMP - intended for operation in luminaires with traditional fluorescent-type lampholders wired directly to the branch circuit. This includes both factory-wired luminaires as well as those converted for this purpose under a retrofit program.

SAFETY PRECAUTIONS

- Product should be installed by a qualified electrician
- Switch off power supply before commencing work, make sure correct connection before powering back on.
- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- Suitable for damp locations.
- Suitable for use with 5W Emergency Battery Backup - #90405 (Sold Separately).
- Only use the control provided with or specified by these instructions to control this lamp. This lamp will not operate properly when connected to a standard (incandescent) dimmer or dimming control. Dimmable only when used with special 0-10V system interface component, ETA Q1.
- The units covered by this report were intended to retrofit surface mount, Type IC or non-IC recessed mount listed fluorescent luminaires that use maximum 4 straight tubular lamps, the minimum lamp compartment dimensions are below:

ITEM#	WATTAGE	MINIMUM COMPARTMENT OF LUMINAIRE	LAMP QUANTITY	LAMP TO LAMP SPACING
91508	12W	47.6" L x 20.9" W x 3.9" H	4	3.5"
90404	15W			

CAUTION: "This luminaire has been modified to operate LED lamps. Do not attempt to install or operate fluorescent lamps in this luminaire," shall be marked on the retrofit luminaire where readily visible by the user during normal maintenance including re-lamping.

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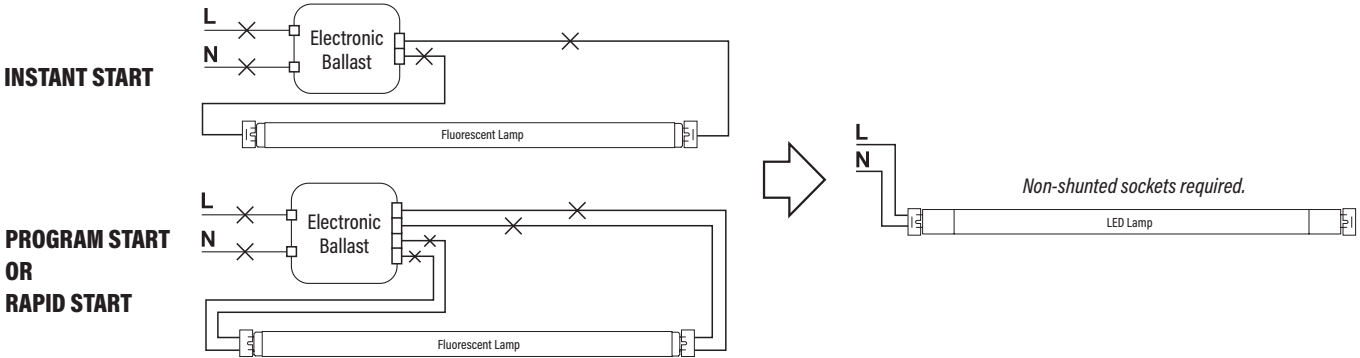
INSTALL INSTRUCTIONS (UL TYPE A & B)

Mode II: DIRECT WIRE (Bypass) INSTRUCTIONS - SINGLED ENDED

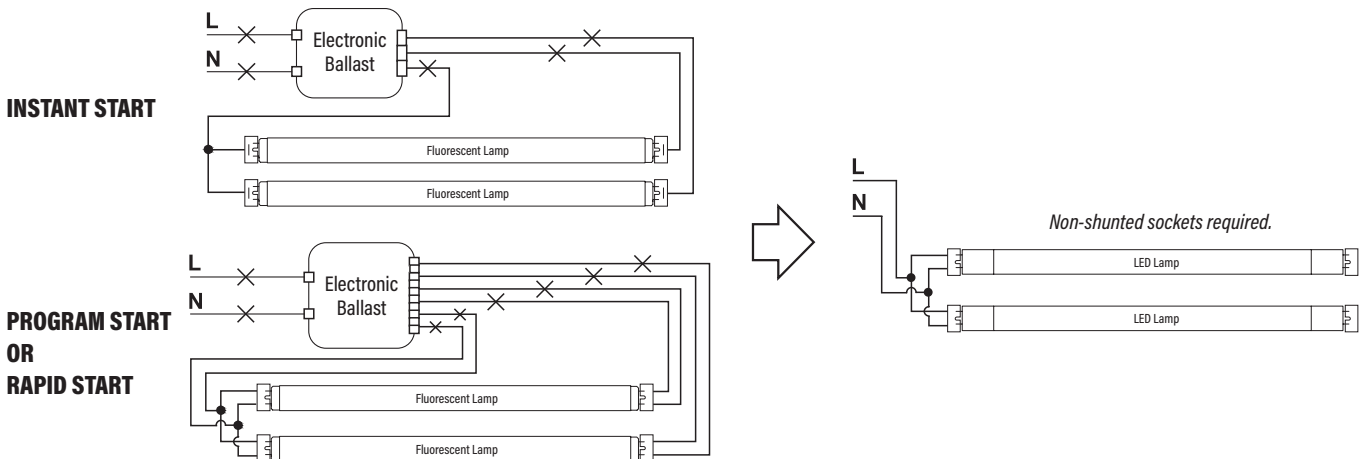
⚠ WARNING DISCONNECT POWER BEFORE INSTALLING OR SERVICING.

SINGLE ENDED - The below ballast wiring represents typical configuration. The actual ballast wiring varies according to the ballast model. The socket must be non-shunted.

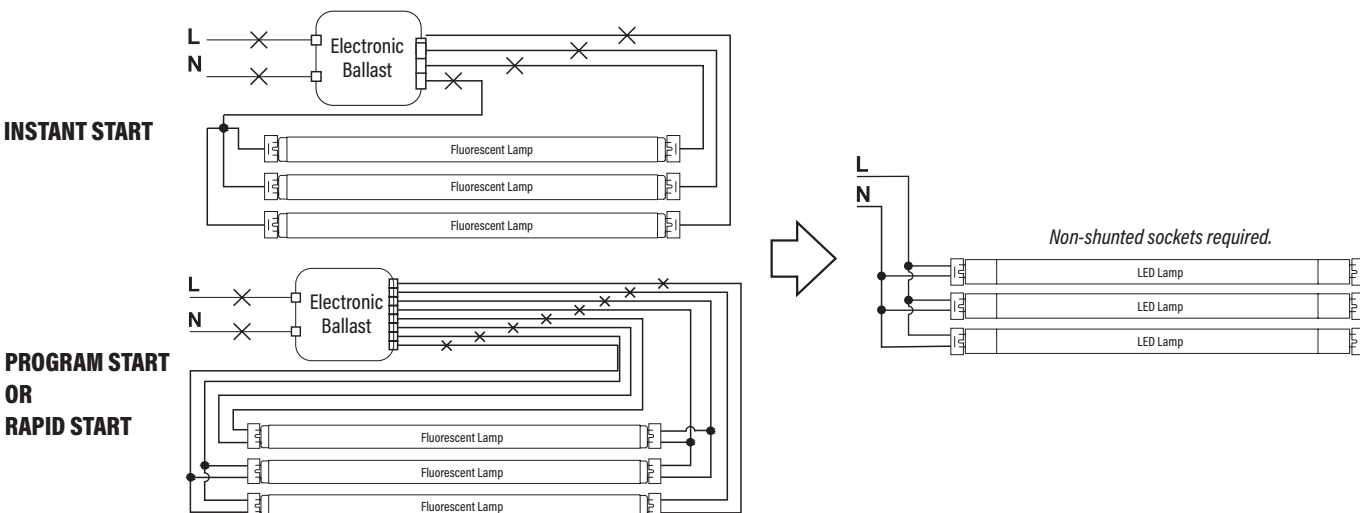
RETROFIT LUMINAIRE WITH ONE LAMP



RETROFIT LUMINAIRE WITH TWO LAMPS



RETROFIT LUMINAIRE WITH THREE LAMPS



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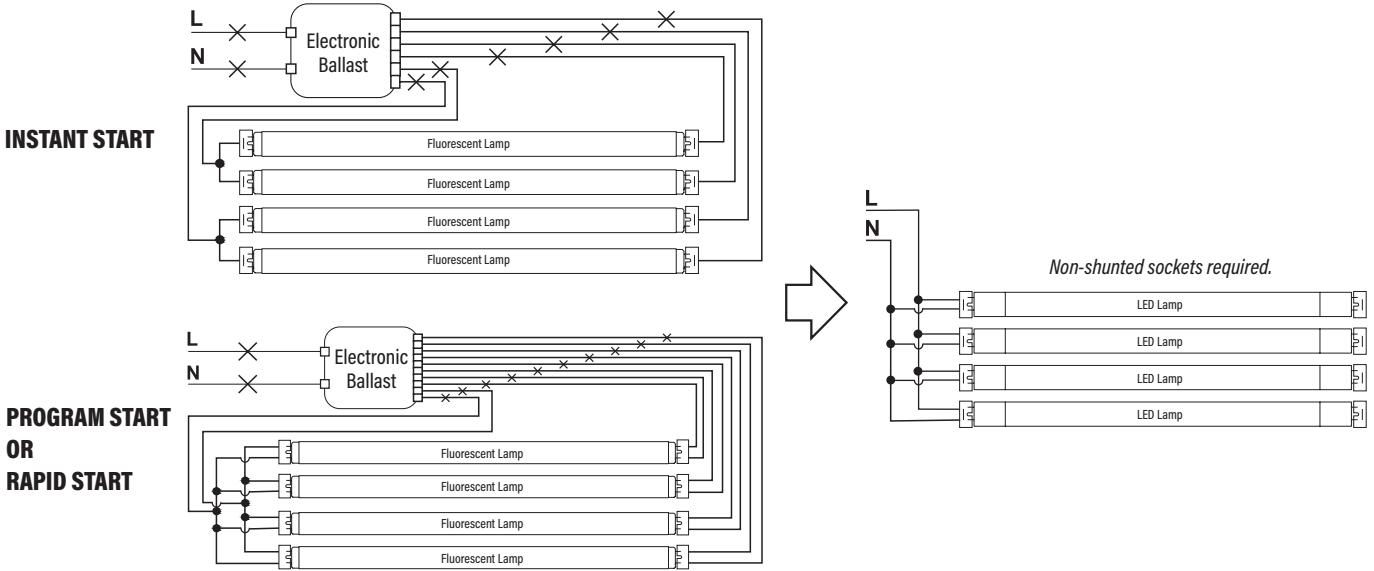
PQL
PREMIUM QUALITY LIGHTING®

Mode II: DIRECT WIRE (Bypass) INSTRUCTIONS - SINGLED ENDED



WARNING DISCONNECT POWER BEFORE INSTALLING OR SERVICING.

RETROFIT LUMINAIRE WITH FOUR LAMPS



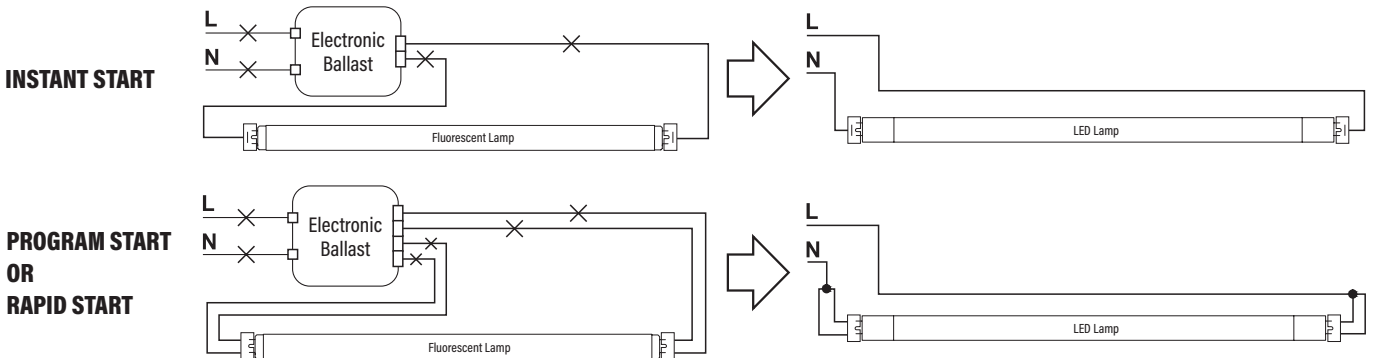
Mode II: DIRECT WIRE (Bypass) INSTRUCTIONS - DOUBLE ENDED



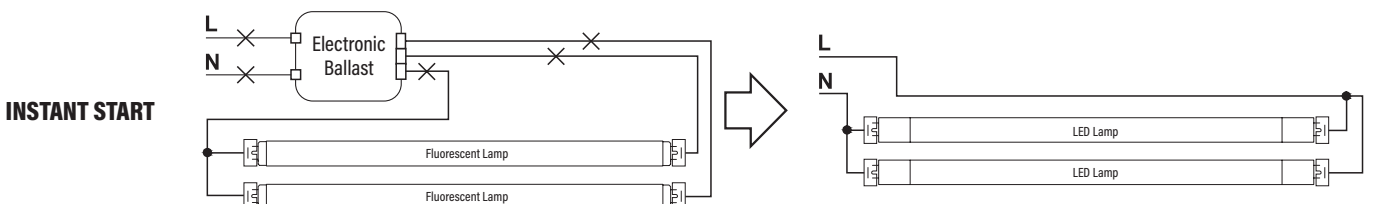
WARNING DISCONNECT POWER BEFORE INSTALLING OR SERVICING.

DOUBLE ENDED - The below ballast wiring represents typical configuration. The actual ballast wiring varies according to the ballast model. It is not a requirement to change the sockets (if in good condition) to operate double ended tubes, regardless of the socket type but, shunted or jumped sockets will provide the best connection. Please make sure one side of the fixture is connected to Live (L) and the other side to Neutral (N).

RETROFIT LUMINAIRE WITH ONE LAMP



RETROFIT LUMINAIRE WITH TWO LAMPS



LED T8 SUPER HYBRID - 12W / 15W

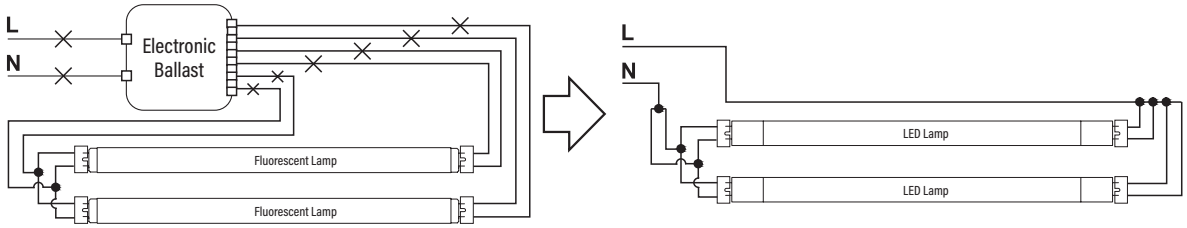
INSTALL INSTRUCTIONS (UL TYPE A & B)

Mode II: DIRECT WIRE (Bypass) INSTRUCTIONS - DOUBLE ENDED

WARNING DISCONNECT POWER BEFORE INSTALLING OR SERVICING.

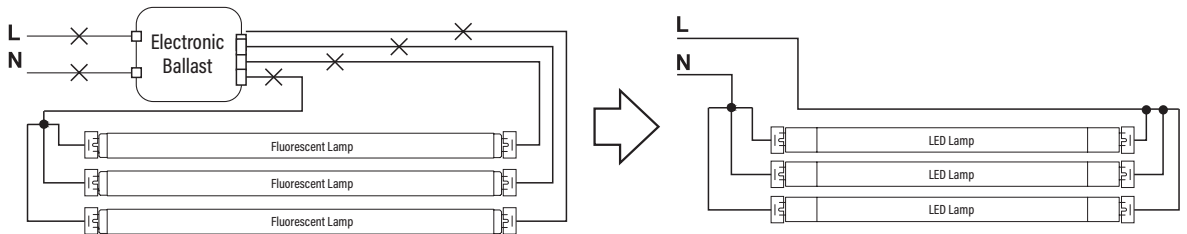
RETROFIT LUMINAIRE WITH TWO LAMPS (cont'd)

**PROGRAM START
OR
RAPID START**

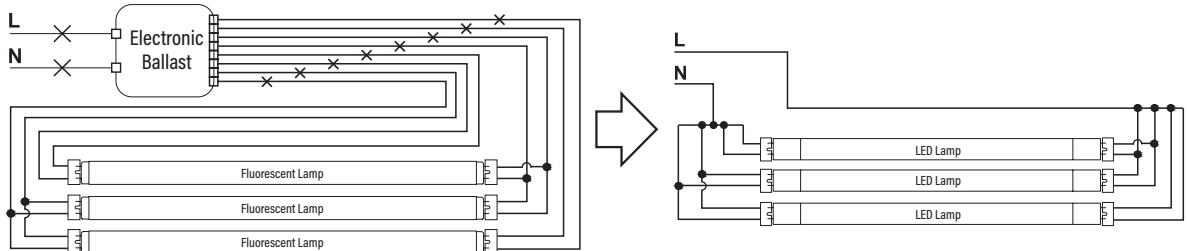


RETROFIT LUMINAIRE WITH THREE LAMPS

INSTANT START

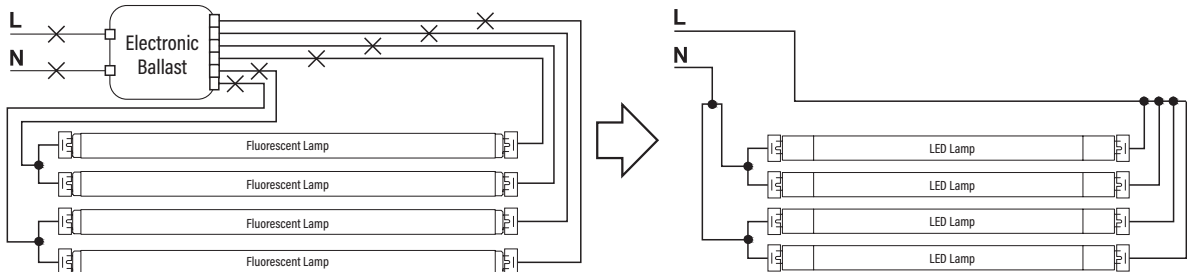


**PROGRAM START
OR
RAPID START**



RETROFIT LUMINAIRE WITH FOUR LAMPS

INSTANT START



**PROGRAM START
OR
RAPID START**

